

**Nevada Department of Conservation and
Natural Resources**

**Division of Environmental Protection
Bureau of Waste Management**



2003 Recycling Status And Market Development Report

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Executive Summary

Nevada has struggled to achieve consistent performance in waste reduction since recycling goals were adopted in 1991. Although statutory requirements have largely been met, some recycling program components need strengthening in order to reach the desired goal of recycling at least 25% of Nevada's solid waste. Carson City, Douglas County, and Washoe County have all made significant progress toward or meeting the goal. Unfortunately, Clark County has not been able to realize substantial gains in recycling since implementing statutory curbside programs more than ten years ago. In no small part, this is due to the explosive population growth that has strained many of Clark County's resources. As residential development has expanded across the entire Las Vegas Valley, having only two municipally-supported drop-off locations for recycling has become increasingly inconvenient and discouraging for many who would like to recycle.

Nevada Division of Environmental Protection (NDEP) is proposing statutory change in Assembly Bill 447 (AB 447) that will address several of the issues that

are restraining recycling's growth. Availability of recycling to the large number of urban Nevadans who live in apartment houses and mobile homes and creating local sources of technical and promotional assistance are two major concerns addressed in this bill. This report provides background and discussion of the main issues Nevada recycling efforts encountered and addressed since the 2001 biennial report and also makes recommendations summarized below that will help to grow and maintain recycling in the state.

NDEP is proposing the following changes to recycling laws in AB 447:

- Change the funding mechanism of the solid waste management account by repealing the \$1 tire tax on the retail sale of new vehicle tires and instituting a \$0.30/ton tax on all waste disposed at permitted landfills that accept 20 tons of waste/day or more;
- Change reporting requirements of recycling to move responsibility for collecting annual recycling reports from the counties to NDEP and implement a minor civil penalty to improve reporting participation;
- Give NDEP the authority to award grants to municipalities, educational institutions, or nonprofit organizations for projects that enhance solid waste management systems and promote the efficient use of resources;
- Require counties with populations greater than 100,000 to provide recycling collection at multifamily dwellings where services for the collection of solid waste are provided;
- Require counties with populations greater than 100,000 to provide waste reduction and recycling service information to businesses at the time of business license application or upon the businesses request;
- Creation of a recycling coordinator position at the county-level in counties required to adopt recycling programs and the opportunity to receive financial assistance from NDEP to fund the position;
- Require local ordinances be adopted in jurisdictions required to adopt recycling programs that provide for the storage of recyclable materials in new building permit applications for commercial office buildings larger than 50,000 square feet and in multifamily residential complexes with 20 or more units;
- Modify recycling program reviews at the municipal level by increasing review frequency from once every 36 months to once every 24 months and adding NDEP approval to the review process;
- Require NDEP to develop and implement a recognition program to identify outstanding examples of resource conservation, waste reduction, and recycling in Nevada.

NDEP continues an extensive program to educate, promote, and encourage solid waste reduction and recycling in the state through the recycling contracts program. In the three year period from State Fiscal Year (SFY) 2000-2002, NDEP has funded 23 public agencies and nonprofit groups from across the state with over \$500,000 of NDEP's allocation from the solid waste management

account. Additionally, USEPA Region 9 committed over \$100,000 to recycling projects in Clark County over the last two years.

Developing markets for recyclable materials in Nevada remains a challenge. NDEP is recommending the repeal of NRS 444.587 that delegates NDEP as the agency for developing markets and reporting to the legislature on accomplishments and issues regarding recycling market development.

The state recycling program remains committed to help develop and maintain the economic strength of recycling in Nevada. NDEP makes two recommendations in this market development report. Years of focus on attracting businesses that use post-consumer feedstocks in their manufacturing process have yielded modest results. Efforts to improve the economic viability of recycling in Nevada might best be invested in processing operations. The rapidly growing population and diversification of Nevada's economy make the collection and recycling of materials from the commercial sector increasingly attractive.

NDEP also believes renewed emphasis on environmentally-preferable procurement and recycled-content products is necessary at the state and local public agency level to encourage markets for recyclables. A conscious decision to support sustainable and efficient products and goods needs to be made by all government branches.

1.0 Recycling Legislation

1.1 Reporting Mandates

This document fulfills two reporting requirements of NDEP to the Nevada Legislature. NRS 444A.070 requires the director of the Department of Conservation and Natural Resources to deliver a biennial report delivered every odd-numbered year on the status of current and proposed programs for recycling and reuse of materials and on any other matter relating to recycling and reuse which he deems appropriate.

NRS 444.587 requires the NDEP to deliver an annual report which includes a general description of the markets for recycled materials in Nevada, any recommendations relating to increasing the demand for recycled materials and developing markets for recycled materials, the development of state and local policies which encourage the purchasing of products manufactured from recycled materials, and financial assistance and incentives to encourage the use of recycled materials in this state.

1.2 Legislative Initiatives

NDEP has identified several areas of concern regarding current solid waste and recycling statutes and regulations and has proposed amendments in the 2003

legislative session to address these concerns. Assembly Bill 447 (AB 447) proposes changes to NRS Chapter 444 solid waste statutes and NRS Chapter 444A recycling statutes. A copy of the proposed legislation is included in this report as Appendix A. As the proposed amendments address a range of concerns, the circumstances leading to NDEP's identification of the concerns also vary widely. Some of the proposed changes are minor and relate to modifying language to eliminate outdated references in the statutes. Some proposed amendments are substantial and are discussed below and elsewhere in this report.

1.2.1. Fee on Solid Waste

As mentioned above, funding for the oversight and regulation of solid waste and recycling in the state comes almost wholly from the \$1 retail tire tax. The US Environmental Protection Agency (USEPA) estimates that only 2% of the municipal solid waste generated in the US in 2000 was used vehicle tires. Placing a fee on 2% of the waste stream to fund nearly 100% of regulatory programs to manage the waste is an inequity that needs correction. Furthermore, it appears inconsistent with the original intent of the tire fee, which was to manage and recycle waste vehicle tires.

NDEP's proposal is revenue neutral by rescinding the \$1 tire fee and replacing it with a \$0.30/ton fee on solid waste disposed in a facility that receives 20 tons or more of solid waste per day. This funding mechanism is preferable for several reasons. It addresses an NDEP concern regarding the growing amount of out-of-state waste being disposed in Nevada-permitted waste sites. Since 1998 the quantity of solid waste imports disposed in Nevada has grown by approximately 130% from 232,000 tons/year to 536,000 tons/year in 2002. In 2002 out-of-state waste imports represented approximately 10% of waste disposed in Nevada landfills. Due to the current funding mechanism, Nevada tire purchasers had to fund the regulatory management of this waste.

A fee on the quantity of waste disposed also serves as an incentive to manage solid waste in an alternate manner, such as reuse and recycling. Encouraging resource conservation through reuse and recycling has long been a stated goal of Nevada solid waste and recycling laws. The arid climate and open space in Nevada ultimately leads to less expensive tipping fees at the landfills, some of the lowest tipping fees in the nation. This low cost represents a significant barrier to recycling. While the \$0.30/ton fee will have a negligible effect on Nevada rate payers, it will generate a significant source of revenue that will grow as waste disposal grows.

1.2.2. Modification of Reporting Requirements

One proposed amendment in AB 447 includes modification of the reporting requirements currently contained in NRS 444A.050 and in regulations NAC 444A.135 and NAC 444A.140. In order to adequately monitor and regulate solid

waste, it is necessary for the solid waste management authority to have access to current and accurate data regarding the quantities of waste disposed and recycled in the state. The regulatory summary in this report includes discussion of recent recycling center regulations promulgated by the Clark County Board of Health. These regulations were largely unpopular with Clark County recycling businesses and most did not report recycling data for 2001 to CCHD. Therefore, NDEP found it impossible to provide an accurate state recycling rate in 2001. NDEP believes it would be best to remove the local regulatory agency from the reporting chain for the following reasons.

Under the present system, waste disposal reporting to NDEP is required as part of disposal facility regulations for all permitted waste disposal sites and this system is largely satisfactory. No revision to disposal site waste reporting requirements is being proposed at this time. However, collecting data on recycling, as required by NAC 444A.135 and NAC 444A.140, has long been problematic. Current regulations require the municipalities to collect reports from recycling centers within their jurisdictions, verify and compile the data from individual recycling centers into municipal totals, and forward the reports of total quantities of materials recycled to NDEP for further verification and compilation into a statewide report.

Delegating most of the work in collecting the recycling data to the municipalities has proven difficult and burdensome to these entities. Most of the counties mandated to report have complied, but several have not due to manpower and resource considerations. Additionally, while the participating counties make great effort to provide complete and accurate data, they occasionally can not provide adequate reports making analysis and tracking of recycling programs difficult. Lack of consistency in data collection and reporting by municipalities results in recycling rate reports that invite contention and question by stakeholders.

NDEP proposes to create recycling center reporting requirements in statute with recyclers reporting directly to NDEP. Confidentiality of proprietary information is assured in the proposed statute. This should improve reporting compliance by removing the burden from the municipality and increase accuracy through quality assurance standards administered by NDEP. A minor administrative penalty is proposed to further encourage recycling center compliance.

1.2.3. Establish Solid Waste and Recycling Grants

NDEP is requesting the state legislature provide NDEP the authority to award grants to municipalities, educational institutions and nonprofit organizations for projects that enhance solid waste management systems and promote resource conservation and recycling. One of the mandates of AB 320 was for NDEP to develop a program of public education that provides information and increases public awareness of the importance to properly manage and dispose of solid waste and to promote recycling, reuse and waste reduction. NDEP has both

broad and specific requirements to fulfill in order to satisfy these requirements under NRS 444A.110. One of the most important mechanisms NDEP has used to address these requirements has been a recycling contracts program. Awarded annually, NDEP has budgeted a significant portion of its revenue from the solid waste management account to fund this recycling contracts program.

The program does not fit the intent of state procurement contracts well. The request-for-proposal process generates responses to NDEP that request funding of a wide variety of projects. It is difficult to compare the merits of proposals that are similar in the very broad goals of encouraging and promoting solid waste reduction, recycling, and resource conservation, but approach the issue in very dissimilar manners. NDEP has supported proposals that fund the start-up and operation of municipal recycling programs, perform research in the areas of recycling and conservation, provide public education, encourage market development of recycling businesses, and promote environmentally-preferable procurement. NDEP seeks latitude from the rigid contract review process to allow more flexible selection of program funding as a grant.

1.2.4. Other Legislative Initiatives

NDEP is seeking other recycling-related amendments to the statutes in AB 447. These are highlighted below and the necessity of these proposed amendments are discussed in detail in relevant sections of this report.

Other key elements of NDEP's proposed amendments are:

- Require recycling service be offered to multifamily housing complexes and businesses if recycling service is offered to private residences and public buildings;
- Creation of a recycling coordinator position at the county-level in counties required to have recycling programs;
- Require counties or health districts that have recycling programs to provide businesses with information and assistance in solid waste reduction and recycling at the time of application of a business license;
- Amend the municipal recycling program review process by increasing review frequency to once every 24 months from 36 months and adding NDEP approval to the process;
- Require local ordinance in counties required to have a recycling program to provide adequate space for recycling at large business complexes (greater than 50,000 square feet) and multifamily complexes.

1.3 Regulatory Summary

1.3.1 State Regulation Summary

NDEP has completed the regulatory amendment process implementing the changes required to satisfy AB 564. These changes are included in this report

as Appendix B. This statutory change also required NDEP to develop a model plan for recycling in public buildings. NDEP completed this task in October 2001 and a copy of the Public Buildings Recycling Programs Model Plan is attached to this report as Appendix C.

The new regulations added NAC 444A.090 to define “*Public Building*” for the purpose of recycling requirements, modified NAC 444A.130 to include a program for separation of recyclable material at public buildings and a compliance date for affected municipalities, and added new section NAC 444A.500 addressing recycling programs at state agencies. Also as discussed in the previous section, NAC 444A.120 was amended to reflect new population bases as required by AB 650.

NDEP petitioned the SEC to modify certain solid waste regulations in NAC Chapter 444 in September 2002. This petition included amendment to compost plant regulations that are of note to recycling. SEC adopted regulations in section NAC 444.670 that are intended to clarify the permitting process for compost plants, define compost plant operating and permit criteria, and modified the required buffer zone distances on compost plant properties. As of the writing of this report, there is one new compost facility that has entered the permitting process.

1.3.2. Municipal Regulation Summary

Clark County Health District, acting in its role as the solid waste management authority of Clark County, adopted standards and regulation for recycling centers in December 2001. Recycling center regulations were developed by CCHD to address issues concerning illegal dumpsites and concerns related to businesses operating as “sham” recyclers. The new recycling center regulations also helped clarify issues identified after the adoption of transfer station regulations and materials recovery facility (MRF) regulations.

Material recovery facility regulations were adopted by the Clark County Board of Health in May 2000. Subsequent to the passage of the original MRF regulations, some board members expressed concern that some parts of these new regulations were in conflict with certain regulations and ordinances of local jurisdictions. Additionally, CCHD received applications for permits to operate MRFs from Clark County businesses that were clearly not MRFs, but recycling centers. To remedy this situation, CCHD petitioned the Clark County Board of Health to adopt standards and regulations pertaining to recycling centers. The Clark County Board of Health heard and adopted regulations for operation of recycling centers in December 2001. Following passage of these regulations, CCHD heard from a number of recycling businesses with concern they could not meet the new recycling center definition requirements. In particular the regulation prohibiting the generation of any solid waste by a recycling center.

CCHD addressed these concerns and in January 2002 petitioned the Board of Health to revise the recycling center regulations to permit the generation of “*residual solid waste*” after processing of materials by the center. Residual solid waste is defined in the Clark County District Board of Health Solid Waste Management Regulations as “*an insubstantial amount of any contaminant material, as determined by the solid waste management authority, that remains or is left after separation, and removal of legitimate recyclable materials, that cannot be recycled and that must be disposed of as a solid waste pursuant to Section 8, Subsection 1, of these regulations.*”. The Board of Health adopted the proposed regulations and a number of recycling businesses are in the permit application process, with several permits completed and issued.

The process of adopting these regulations and the introduction of a permitting requirement led to some controversy and resistance among some of the affected businesses. CCHD indicated that the primary reason cited by commercial recyclers for not completing the 2001 recycling report was due to disagreement over proposed regulations and the process. NDEP believes that such actions of noncompliance can be alleviated by removing the local regulatory authority from the recycling report process and requiring commercial recyclers to report directly to NDEP. NDEP has proposed statutory amendment in AB 447 that would create such a modified reporting process and maintain complete confidentiality of all proprietary information.

1.4 Recycling Legislation Overview and Summary

A brief summary of Nevada recycling legislation follows; more in-depth historical summary was presented in the 2001 Biennial Recycling report. The reader can review the 2001 report and this report on the Nevada Division of Environmental Protection web site at <http://ndep.nv.gov/recycl/status.htm>.

Nevada recycling statutes began with passage of Assembly Bill 320 in the 1991 legislative session. AB 320 established solid waste recycling requirements for certain municipalities, a statewide goal of recycling at least 25% of the solid waste generated, established preferential procurement policy for goods made of some recycled-content materials, and directed NDEP to provide a program of education and technical assistance to the public and municipalities concerning recycling.

Municipal recycling program requirements are tiered on the basis of population. Counties with large metropolitan centers (populations greater than 100,000) are mandated the most rigorous program standards including curbside collection of recyclables, the establishment of recycling centers if none exist, and maintaining a program for the disposal of household hazardous waste. Counties with significant urban and suburban areas (populations less than 100,000 and greater than 40,000) are required to establish recycling centers if none exist and to provide a household hazardous waste disposal program. Rural counties

(populations less than 40,000) are encouraged to offer recycling and household hazardous waste programs as they can.

AB 320 was promulgated in Nevada Revised Statutes (NRS) Chapter 444A and with the authority created by these statutes, the State Environmental Commission adopted regulations to fulfill the bill's mandates in Nevada Administrative Code (NAC) Chapter 444A. In addition to AB 320, three other bills were passed by the 66th legislature pertaining to recycling. These bills addressed issues of plastic resin identification, paper recycling by state government, the development of markets for collected recyclables, and the procurement of materials by local government and other public agencies of goods and equipment, especially paper, that contain recycled materials.

Funding for these mandates was established by creation of a \$1 surcharge on the retail sale of all new vehicle tires in the state. Originally designated the *"Account for Recycling"*, the statute was subsequently amended to prevent closure of this account on a sunset date of March 15, 1993 and was renamed the *"Account for Solid Waste Management"*. The *"Account for Solid Waste Management"* funds all solid waste regulatory programs in the state, not just recycling. This includes solid waste disposal site permitting and facility inspections and monitoring. As such, the revenues from this account are disbursed among the three solid waste management authorities in the state; NDEP, Clark County Health District; and Washoe County District Health Department.

The recycling statutes passed in 1991 have been amended several times in addition to the changes to the tire fund discussed above. Significant changes were introduced and passed in the 1999 legislative session as part of AB 564. AB 564 added public buildings to the requirement that residential premises in specific municipalities be offered curbside pickup of recyclables. AB 564 also broadly expanded the list of public entities that must recycle their waste paper and paper products. AB 564 was discussed in some detail in the 2001 Biennial Recycling report, since the 2001 report was issued the State Environmental Commission has adopted regulations to implement the statute.

In the 2001 legislative session, one significant amendment was made with the adoption of AB 650 relating to the classification of recycling programs based on populations. AB 650 was introduced to make adjustments to several population-based statutes using the latest decennial census data (2000 census). It affected NRS 444A.040 and NAC 444A.120 by raising the minimum population of a county required to offer recycling programs from 25,000 to 40,000. The population requiring the highest tier recycling program remained the same at over 100,000.

2.0 STATUS OF RECYCLING IN NEVADA

2.1 Solid Waste Disposal Trends

The table below shows the tonnages of solid waste reported disposed of in permitted Nevada solid waste disposal sites from 1999 to 2002. Wastes categorized as “industrial & special” include several types of solid waste, which have specific management requirements for permitted landfill disposal in Nevada, but by weight, typically about 90% of these wastes are debris from construction and demolition projects (wood, concrete, asphalt, drywall, etc.).

Table 2-1 Nevada Solid Waste Disposal

	1999	2000	2001	2002
MSW Disposal from In-State Sources (tons)	3,152,921	3,355,544	3,255,840	2,834,625
MSW Disposal from Out-of-State Sources (tons)	449,354	541,385	532,615	535,507
Industrial & Special Waste Disposal (tons)	1,521,948	1,403,561	1,730,089	1,902,582
Total Solid Waste Disposal (tons)	5,124,223	5,300,490	5,518,544	5,272,714

Total waste disposal continued to grow from 1999 to 2001 by approximately 3% to 4% per year. Total waste disposal declined in 2002, as compared to the previous year, for the first time since NDEP began to keep detailed records of waste disposal in 1993. Waste disposal declined by nearly -5% in 2002 as compared to 2001. This trend is likely tied to the down-turn in the economy and not an increase in recycling or diversion. Recycling rate reports for 2002 have not yet been received, but NDEP does not have knowledge of any significant factors in recycling that may have led to a proportionate increase in recycling and therefore subsequent decrease in disposal.

Due to a change in reporting of waste disposal at the Apex landfill in Clark County, the largest landfill in the state, municipal solid waste disposal showed a very significant decrease and industrial & special waste showed a significant increase from 2001 to 2002. This change is not significant to the actual waste generation trends in Nevada, but simply represents a change in the landfill's designation of a particular waste stream.

The decline in the total Nevada municipal solid waste disposed is surprising despite a slower economy, in consideration of the continued state population growth. It is possible that the contribution of waste from the tourist population is greater per capita than the permanent population. The Las Vegas Convention and Visitors Authority reports that the number of visitors to Las Vegas decreased by slightly more than 2% from 2000 to 2001 and remained flat in 2002. The State demographer estimates that Clark County population grew by 6.6% and 5% in 2001 and 2002, as compared to the previous years. As the table below indicates, disposal of MSW in Clark County followed the trend in the decline of tourism, not the increase in population. Unfortunately, because of the

modification in Apex's reporting methodology, comparison to 2002 MSW disposal is not useful.

Table 2-2 Clark County Waste Disposal and vs. Visitor & Population Trends

	1999	2000	2001	2002
MSW Disposed in Clark County (tons)	2,312,247	2,467,571	2,338,305	1,922,073 ¹
Percent Change from Previous Year	8.1%	6.7%	-3.0%	-13.0%
Number of Visitors to Las Vegas*	33,809,134	35,849,691	35,017,317	35,071,504
Percent Change from Previous Year	10.5%	6.0%	-2.3%	0.2%
Clark County Population**	1,327,145	1,394,440	1,485,855	1,560,653
Percent Change from Previous Year	5.2%	5.0%	6.6%	5.0%

¹ Apex landfill modified reporting methodology, reducing the quantity of MSW reported disposed and increasing the quantity of I&S waste reported disposed.

* Source Las Vegas Convention and Visitors Authority

** Source Nevada State Demographer's Office

2.2 Recycling Rate and Trends

As discussed in Section 1.2 of this report, reporting of recyclable materials as been a challenge since the requirement to report was first adopted in regulation by the State Environmental Commission in 1992. The structure of the current reporting system is defined in regulations NAC 444A.135 and NAC 444A.140. NAC 444A.135 requires a recycling center located in a municipality with an approved recycling program (i.e., a municipality with a population of 40,000 or greater) to submit a report of the number of tons of each material recycled by the center in the preceding year. These reports are to be submitted to the municipality or health district in which the recycling center is located by February 15 of every year. NAC 444A.140 requires a municipality with an approved recycling program to submit to the Department of Conservation and Natural Resources a report including the tons of material recycled or diverted from landfill disposal in the previous calendar year and the tons of material disposed of in landfill or other disposal facility by the municipality in the previous year. This report is due to the department by April 1 of every year.

While the NDEP has attempted to collect this data from the affected counties and health districts since the regulations were implemented, it has accomplished this task with varying degrees of success. Several jurisdictions have worked very hard to fulfill this regulation, notably Carson City, Clark County Health District, Douglas County, and Washoe County District Health Department have all made significant efforts to collect and transmit complete and accurate data regarding recycling to NDEP on a yearly basis. The ability of NDEP to report and publicize recycling rates for the state and individual counties is primarily due to these efforts.

However; these jurisdictions, as well as jurisdictions that have not reported consistently, have indicated that meeting this regulation is a burden to their staff

and resources. They have indicated that getting participation from the individual recycling centers and compiling and verifying the data is the biggest challenge. For this reason NDEP has proposed changes to the reporting requirements be promulgated by statutory amendment. The issue was exemplified in the 2001 recycling report cycle.

In 2001, no report was received from Clark County Health District because only one recycling center filed the required report. This report was filed by Republic Services of Southern Nevada (RSSN), the primary franchisee providing garbage collection and hauling to residences and businesses in Clark County. The RSSN recycling report represents the recyclable material collected in the curbside program and by the few commercial clients that are provided paper recycling by the company. The curbside recycling program in Clark County diverts only about 3% to 4% of the total MSW generated in the county. This low performance rate is not substantially anomalous for curbside programs nationwide. These curbside programs provide great awareness and education on recycling to those that have it available and are extremely valuable for those reasons. But due to voluntary participation and greater convenience of disposal over recycling, they do not generally divert a significant portion of MSW from landfill disposal.

Most recycling is performed outside the curbside programs by the private recycling companies. As a form of protest against regulatory actions taken by CCHD in 2001, the commercial recycling firms in Clark County did not submit recycling reports. NDEP believes that based on the data provided by RSSN on the curbside program and informal personal communication with some of Clark County's recycling businesses, the diversion rate for Clark County remained flat in 2001 as compared to 2000, or about 10% of the total MSW generated.

NDEP also has concerns regarding the recycling report received from Washoe County District Health Department (WCDHD) in 2001. The WCDHD report indicated a marked increase in the recycling rate from 23% in 2000 to 29% in 2001. After careful study by NDEP it was determined that this increase was almost certainly due to misreporting by one of the recycling centers. Specifically, the report of rendered animal matter recycled indicated an increase from approximately 200 tons in 2000 to 96,000 tons in 2001 and recycled restaurant grease increased from about 600 tons to 17,000 tons. All other commodities reported recycled were relatively flat from 2000 to 2001, with exception of a reported decrease in biosolids recycling.

NDEP reviewed historical Washoe County recycling reports and found that there never was a report of rendered animal matter higher than approximately 500 tons in a given year. NDEP also contacted an industry trade group (National Renders Association, Inc.) to determine if this was a reasonable value for rendering from the Reno market. They indicated that it was not. NDEP informally contacted WCDHD to alert them to its concerns regarding this issue. WCDHD indicated in a phone conversation that they too questioned the validity of the number and asked the recycler reporting these values to confirm their accuracy. WCDHD

stated that the recycler confirmed the values and they decided to submit the results to NDEP and publicize the associated recycling rate.

Another issue regarding the 2001 Washoe County recycling report involved the reported tonnage of biosolids recycled. The Truckee Meadows Sanitary Authority has for a number years sent biosolids from its treatment plants to be used as a soil amendment for agriculture applications. The 2001 Washoe County report indicated that approximately 11,000 tons of biosolids had been recycled in this manner. This was a large decrease from previous years when over 50,000 tons were reported recycled. NDEP contacted the Truckee Meadows Sanitary Authority and asked why there had been such a marked decrease in the biosolids recycling program. A Truckee Meadows Sanitary Authority representative stated that there were no significant changes in the program and the biosolids tonnage processed in this manner should have remained about the same. Taking these factors into consideration, NDEP believes a reasonable estimate for recycling in Washoe County in 2001 to be about 25% as compared to 23% in 2000.

Other municipalities reporting in 2001 were Carson City, Douglas County, and Eureka County. Both Carson City and Douglas County's recycling rates were almost the same in 2001 as in 2000, with slight decreases reported. The table below provides summary of the state recycling rates for 1999 through 2001. Due to the estimated nature of the 2001 recycling rate, a detailed analysis of recycling trends is not provided in this report, but overall NDEP believes recycling has stagnated due to market conditions for recyclables and the present garbage collection systems in place in Nevada's urban centers.

Table 2-3 Nevada Recycling Rates

	1999	2000	2001
Tons of MSW Recycled (tons)	386,415	517,159	463,231*
Tons of MSW Disposed¹ (tons)	3,048,407	3,179,869	3,043,028
Percent Recycling Rate	11%	14%	13%*

¹Tons of MSW disposed is tonnage of municipal solid waste reported disposed generated from only those counties participating in the recycling rate survey.

*Tonnage and recycling rate based on an estimate by NDEP.

3.0 NDEP RECYCLING CONTRACTS PROGRAM

3.1 Funding

As discussed in Sections 1.2 and 1.4, state recycling programs are funded from the revenues of the \$1 tax on the purchase of a new retail tire in Nevada. By statute, these funds are deposited in the Solid Waste Management Account and the funds are divided four ways as follows; 44.5% to the Department of Conservation and Natural Resources, 30% to the board of health of the largest health district in the state (Clark County), 25% to the board of health of the second largest health district in the state (Washoe County), and 0.5% to the

Department of Taxation. The table below shows the allocation of revenues from the Solid Waste Management Account between the four jurisdictions and the total revenues collected for the three year time period from SFY 2000 to SFY 2002.

Table 3-1 Solid Waste Management Account Summary

SWMA Revenue Distribution¹	SFY 2000	SFY 2001	SFY 2002
DCNR	\$594,875.57	\$621,783.95	\$618,734.20
Clark County	\$401,039.73	\$419,180.20	\$417,124.18
Washoe County	\$334,199.77	\$349,316.82	\$347,603.48
Dept. of Taxation	\$6,684.00	\$6,986.34	\$6,952.07
Total	\$1,336,799.07	\$1,397,267.31	\$1,390,413.93

¹Values shown in dollars prior to any balance forward adjustments.

Annual revenues in the solid waste management account were flat from SFY 2001 to SFY 2002. After showing steady growth on pace with population growth historically, the account revenues took a significant down turn with the economy and hindered the recycling contracts program along with all solid waste management activities conducted by the state in SFY 2002.

3.2 Recycling Contract Administration

NDEP's recycling contracts program is the primary tool used to provide resources for education on solid waste reduction and to promote reuse and recycling throughout the state. The recycling contracts are a key element of the state recycling program and several organizations and municipalities rely on the program to fund projects and initiatives that address a wide-range of issues related to recycling, solid waste management, and resource conservation.

Table 3-2 below summarizes NDEP spending on recycling contracts for the three year period SFY 2000 to SFY 2002. Appendix D is a table summarizing these recycling contracts and their values in more detail. Total NDEP obligation to recycling contracts equaled \$584,964 during this period. This represents nearly one-third of NDEP's allocation of the solid waste management account during this time.

In SFY 2003, NDEP has obligated approximately \$42,900 of carry-forward authority and \$21,200 in new budget authority to recycling contracts. Obligating this carry-forward authority has enabled four contractors to continue their work in SFY 2003 utilizing money that was unspent in the original term of their contracts. NDEP has also sent recycling contracts worth \$28,605 to two entities for SFY 2003, but these have not yet been signed and executed.

Table 3-2 Recent Recycling Contract Funding

	SFY 2000	SFY 2001	SFY 2002
Contract Authority Obligated	\$141,097	\$335,922	\$107,945
Contract Authority Expended	\$124,256	\$281,685	\$59,521

The contracts entered into from SFY '00 to SFY '02 were with 23 different entities. Appendix D identifies each of the contractors specifically. Five contracts were with state agencies, six contracts were with municipalities or their agents, three contracts were with school districts, two contracts were with other public agencies, and six were with non-profit groups. One contract for logo development and advertising was with a commercial advertising agency. Table 3-3 summarizes the recycling contract distribution by contractor type and Table 3-4 summarizes contract distribution by region.

Table 3-3 Recycling Contract Distribution SFY 2000-2002 by Entity (23 Contracts)

	SFY 2000	SFY 2001	SFY 2002
State Agencies	\$29,617	\$56,745	\$33,767
Municipality	\$31,063	\$67,330	\$25,618
Public Schools	\$30,000	\$19,500	\$15,190
Other Public Agency	\$18,795	\$26,962	\$0
Non-Profits or Private Business	\$32,432	\$165,386 ¹	\$33,370

¹Includes recycling logo development and advertising contract with Marketing Synergists

Table 3-4 Recycling Contract Distribution SFY 2000-2002 by Region (23 Contracts)

Carson City	2	3	2
Clark County	1	3	2
Douglas County	4	2	0
Washoe County	2	7	2
Other County/Rural	0	4	0
Statewide	1	0	1

NDEP has proposed legislation that would give the agency authority to award recycling grants instead of contracts. The nature of the program does not fit state purchasing and attorney general guidance for contract solicitation well. They advise that a request-for-proposal (RFP) should be as specific as possible, however; the RFPs for the state recycling contracts are necessarily very broad in scope. Appendix D describes the scope of work of recycling contracts executed from SFY 2000-2002.

The goal of the RFP is to solicit a variety of ideas based on the needs identified by local agencies and groups within their communities. NDEP believes they are most aware of the issues and needs for recycling in their hometowns. As such, the contract proposals received range from capital expenditures only to services only to a combination of services and goods. The recycling contract selection committee is then delegated the

very difficult task of selecting winning proposals from this disparate group. The ability to award grants would increase NDEP's flexibility in satisfying this responsibility. It would also help limit the state's exposure to accusation of unfairness or inequity in contract selection.

3.3 Clark County Contracts and Initiatives

3.3.1. Recycling Logo Development and Advertising Campaign Contract

In SFY 2001, NDEP executed a contract with Marketing Synergists of Reno, NV to develop a logo uniquely identifying Nevada recycling and to promote the NDEP recycling hotline telephone number in Clark County. Logo development and creation fulfilled NRS 444A.110(2)(h) requiring NDEP to encourage the reduction of waste and litter by; *"Developing an emblem to signify and advertise the efforts in Nevada to encourage recycling."* Implementation of an advertising campaign to promote and increase public awareness of the NDEP recycling hotline was a need previously identified by NDEP and confirmed by participants at the Clark County recycling forum held in March 2001. Total value of this contract was \$102,000 (includes fee of 2% of contract value assessed by State Purchasing to conduct RFP process).

NDEP selected a recycling emblem which uniquely identifies the State of Nevada and is easily recognizable as pertaining to recycling. This has been accomplished by basing the logo on the universal recycling symbol of three arrows "chasing" in a circle, but incorporating the silhouette of Nevada in the arrows. As used by NDEP and displayed below, it also incorporates the text "Nevada Recycles" and NDEP's name.



The advertising campaign was conducted from late April 2002 through early July 2002 and included TV, radio, and outdoor advertising venues. Specific advertising spots and print ads were developed and produced for the campaign and incorporated the campaign's tag line *"Watch Your Waste"*, the new recycling logo, and the NDEP recycling hotline number. The campaign included airing approximately 125 TV ads on two of the major broadcast stations, 339 radio ads

on three FM stations, and 3 large billboard and 40 bus stop shelters in the Las Vegas valley.

NDEP did not have available funding to perform a post-campaign survey or market research study to measure the true effectiveness of this campaign. The most relevant tool to measure the campaign's effectiveness that NDEP has available is to compare recycling hotline activity before, during and after the campaign. Table 3-4 below summarizes the number of phone calls to the hotline originating from the Las Vegas valley for the period 1999-2002. There is evidence in this data indicating that hotline activity has some seasonal component (more calls in the summer than winter) and a general increase in calls as Clark County's population increases, but it still appears that the campaign did significantly increase caller activity during its run.

Table 3-5 Las Vegas Valley Calls to the Recycling Hotline

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1999	103	76	66	83	78	96	105	134	139	92	88	86
2000	99	86	91	82	78	99	112	125	111	94	72	90
2001	108	75	113	96	109	118	139	139	131	144	114	112
2002	174	143	182	185	224	204	230	248	199	193	172	151

Indicates period of Clark County Advertising Campaign

Calls to the hotline doubled or nearly doubled as compared to the same period in the previous year. The campaign began April 28, 2002, so the similarity in call volume in March 2002 and April is not surprising. May 2002 does appear to have been significantly impacted, both in comparison to the call volume of the previous May and in comparison to the variation in call volume from April to May in 2002 and years past. Following the campaign ending in the first week of July 2002, call activity appears to have remained high in the month of August and shows a gradual decline into the fall and winter.

This is a limited method by which to judge the campaign's effectiveness due to a number of factors, but it does indicate a positive impact on recycling awareness in Las Vegas. NDEP will consider another advertising campaign in the future.

3.3.2 Clark County Recycling Forum

In March 2001, NDEP, Clark County Health District, and Region 9 of USEPA sponsored a recycling forum at the Orleans Hotel and Casino in Las Vegas. The forum was an all-day affair and featured a series of speakers from federal, state and local governments involved in recycling, experts on recycling from the academic and business sectors, and private citizens. The event format included a series of focused panel discussions featuring the invited speakers and finished with an open discussion involving all attendees on issues raised by the panels and other issues pertaining to recycling in Las Vegas. Copies of the forum's agenda and a list of barriers and challenges facing recycling in Las Vegas identified during the open discussion are attached in Appendix E of this report.

Eight categories of barriers and challenges were identified at the forum. The categories identified are: 1) *lack of a comprehensive education and promotion campaign on recycling*; 2) *lack of local markets for recyclables*; 3) *confusion regarding the existing franchise agreement's control over commercially-generated recyclables*; 4) *insufficient room at apartment and business complexes to accommodate recycling containers*; 5) *franchise agreements lack performance standards for recycling*; 6) *State's 25% recycling goal is a voluntary target*; 7) *insufficient State funding*; 8) *a perceived lack of municipal and political leadership and a fragmented local authority and responsibility*.

The final issue regarding "*fragmentation of authority*" is reference to the current authority of the district health departments to act as the municipal solid waste planning agency, but the authority to negotiate and enter into franchise agreements is vested with the county commissions.

NDEP is proposing legislation in AB 447 (Appendix A) to address several of these issues. Below is a summary of NDEP's legislative proposals as they relate to the recycling forum issues.

1) *The lack of a comprehensive education and promotion campaign on recycling.* AB 447 adds the authority for NDEP to develop a program to recognize and publicize outstanding efforts in recycling by individuals, public agencies and institutions, businesses, communities, and other groups. It also requires the creation of a municipal recycling coordinator in counties with populations greater than 100,000 and gives NDEP the authority to issue grants for recycling.

3) *Confusion regarding the existing franchise agreements control over commercially-generated recyclables.* AB 447 requires counties with populations greater than 100,000 to provide businesses with information regarding waste reduction and recycling upon application or renewal of a business license and as requested by licensed businesses.

4) *Insufficient room at apartment and business complexes to accommodate recycling containers.* AB 447 requires counties that must provide a specific level of recycling service to its residents to make the same recycling service available to those residing in multifamily complexes. It also requires the same counties to establish ordinances that provide for sufficient space of recycling containers at large office buildings, commercial complexes, and housing complexes with 20 or more units.

7) *Insufficient State funding available for municipalities.* AB 447 creates a fee assessed on solid waste disposal. At present, this fee would generate the same amount of revenue as the current \$1 retail tire sale surcharge, but as waste disposal rates are increasing at a greater rate than tire sales, sufficient revenue growth is anticipated to address this concern. AB 447 also enables municipalities to apply to NDEP for assistance in funding the mandated recycling coordinator position.

8) *There is a perceived lack of municipal and political leadership.* AB 447 requires counties with populations greater than 100,000 to appoint a recycling coordinator. It also amends current requirements of the municipalities to review their recycling programs on a more frequent basis (once every two years) and to receive NDEP approval of these reviews.

The 2001 Clark County recycling forum was a new concept but realized very useful outcomes, particularly for a one-time event. NDEP would encourage and be willing to organize and participate in another recycling forum or similar event.

3.3.3. USEPA Region 9 Initiatives

USEPA Region 9 has been a very proactive partner to NDEP and CCHD in trying to promote and encourage recycling in Las Vegas. Besides lending staff and support to the 2001 recycling forum in Las Vegas, they have provided funding and support to several recycling projects in Clark County. EPA has provided funding and support totaling more than \$100,000 in 2001 and 2002. These projects and Region 9's support continues into 2003 and EPA staff have expressed their interest in maintaining this role.

Following the recycling forum, Region 9 awarded the Clark County Public Education Foundation a grant of \$40,000 to implement the *Innovations in Reuse in Education* project. In 2002, EPA Region 9 extended the grant and increased funding by an additional \$20,000. This project involves the start-up and operation of a reuse center. The reuse center will provide Clark County businesses and individuals a convenient method to donate goods and equipment to be used by educators and staff of the Clark County School District in the classroom.

The reuse program (now called the *Interact Exchange*) is especially exciting because it includes a partnership with another existing Clark County School District program called *Cyber Corps*. *Cyber Corps* is a program that teaches Clark County high school students computer and technical skills by having them perform supervised maintenance and refurbishment to school electronic equipment. The *Interact Exchange* is able to provide a conduit to receive and process donations of appropriate electronic equipment from public and private sources and funnel them to *Cyber Corps*. In February 2003, this resulted in the donation of working computer systems to a number of Sandy Valley Middle School students.

USEPA Region 9 funding for this project has gone towards lease of warehouse space, funding for warehouse staff and educational consultants, public outreach, office supplies, transportation, insurance and other logistical and operational needs.

USEPA Region 9 also provided over \$35,000 in 2001 and 2002 to fund a resource management study in Clark County by the Tellus Institute. Resource

management is a concept initiated by General Motors to reduce waste generation and disposal costs. General Motors discovered that it could reorganize waste collection and disposal contracts to incentivize the waste contractor to reduce waste, encourage reuse and increase recycling. These actions significantly reduced GM's waste disposal costs and greatly increased its recycling.

The Tellus Institute performed a detailed assessment of the franchise agreement between Clark County and Republic Services of Southern Nevada for waste collection and disposal services in unincorporated Clark County. The final study made suggestions and recommendations on how concepts of resource management might be incorporated into this agreement. A summary of the assessment's recommendations is provided below. However, a primary finding of the report identified that all data necessary to make comprehensive adjustments to the franchise agreement that could enable the incorporation of resource management concepts were not available at this time. The project included a presentation of the study by Tellus Institute staff to local and state government staff in Las Vegas. A copy of the assessment report is included as Appendix F in this document.

The final assessment identified three main recommendations to move waste minimization and reduction forward in Clark County through resource management. They are:

- Provide a financial incentive to the waste collector for raising residential recycling diversion rates over a specified level;
- Emphasize that maximizing cost-effective diversion is a County priority;
- Increase the extent, parameters and transparency of franchise reporting.

While there has been no attempt to implement these changes into the franchise agreement at this time, it is hoped that additional data will be made available to the Tellus Institute to complete a more thorough assessment in the future.

4.0 MARKET DEVELOPMENT REPORT

4.1 Introduction

This is the tenth annual recycling market development report submitted to the director of the legislative counsel bureau by NDEP as mandated by NRS 444.587. Some new strategies for addressing market development of recyclables are identified in this report.

The most significant change from earlier reports is a recommendation to repeal NRS 444.587. In previous reports NDEP recommended designating a more appropriate agency to fulfill these mandates. NDEP proposes in AB 447 (Appendix A) that NRS 444.587 be repealed by the legislature. NDEP would support a bill that designates a more appropriate agency to perform the mandates of NRS 444.587.

Another variation from past reports is a change in emphasis on new business development. Previous reports have tended to focus on attracting businesses to Nevada which use collected recycled materials as a feedstock, thereby driving demand for recyclables. This report recommends initiatives to encourage businesses that collect recyclable materials. This change in focus is detailed below, but is based on what NDEP believes are the conditions most favorable to growth of Nevada's recycling economy.

4.2 Repeal of NRS 444.587

NRS 444.587 requires this market development report to include:

- 1) a general description of markets for recycled materials in the state;
- 2) any recommendations relating to increasing the demand for recycled materials and developing markets for recycled materials;
- 3) the development of local and state policies which encourage the purchasing of products manufactured from recycled materials; and
- 4) financial assistance and incentives to encourage the use of recycled materials in the state.

NRS 444.587 was promulgated in the 66th Legislature in Assembly Bill 361 and requires NDEP to develop markets for recyclables and provide assistance to recyclers in finding markets for their materials. Other market development initiatives AB 361 addressed include procurement of recycled-content products by local governments and procurement of recycled-content paper and other goods by public schools.

While these issues are very important to successful recycling programs, AB 361 did not provide sufficient resources to adequately address the market development mandates and the language used in the adopted statutes placed unrealistic responsibilities on NDEP. Example of this is found in NRS 444.587(1) *The division of environmental protection of the state department of conservation and natural resources shall:*

(a) Develop markets in this state for products made from recycled materials... (underline added for emphasis).

As has been stated in each of the previous market development reports, market development is outside the purview and expertise of NDEP staff and an effective program would exceed both resources and authority of NDEP. Such an issue would be more appropriately addressed by an economic development agency. It is appropriate to renew such emphasis on new business development as the state seeks ways to expand its tax base beyond gaming.

NDEP does try to encourage the markets for recycling. In 1995 with assistance from a grant by USEPA, the Nevada Commission on Economic Development (NCED) hired a Recycling Economic Development Advocate (REDA). NDEP provided funding to continue this contract in 1996. Unfortunately the contract did not produce significant results. NDEP also provided a contract to the NCED in

1997 to develop and print a guide to recycling services and products available in the state. This guide was published in February 1998 and made widely available to interested parties. NDEP has recently partnered with the purchasing division on recycled-content procurement issues and hopes to provide the technical support state purchasing needs to promote environmentally-preferable procurement.

NDEP plans to continue such initiatives in the future in fulfillment of the very broad mandates under NRS 444A.110 to provide public education and technical assistance to Nevadans on recycling and resource conservation. Therefore, to better manage limited resources NDEP has proposed in AB 447 that 444.587 be repealed. NDEP could support a bill in the future that returned these responsibilities to a more appropriate agency with the necessary resources to accomplish the defined tasks.

4.3 Recycled-Content Product Procurement

The universal symbol of three arrows following each other in a circle is emblematic of recycling for several reasons. It is representative of the three elements necessary for successful recycling. These are collection of recyclables, the remanufacturing of the recyclables into new products, and the demand for those products through their procurement. For this reason recycling professionals often speak of the importance of *"Closing the Loop"*, meaning to select recycled-content products over those made of virgin materials.

Assembly Bill 320 passed in 1991 gave the chief of the state purchasing division specific responsibilities to consider the purchase of recycled-content goods without discrimination, if they are of the same quality as the same goods made of virgin materials. AB 320 also directed the state purchasing division to maximize the procurement of recycled-content products and to give preference to those products that are of equal quality and price to products made of virgin materials. This legislation defined similar preferences be given specifically for the purchase of recycled-content paper.

In March 2002 a joint memorandum was issued by the state purchasing division and NDEP encouraging all state agencies to consider the purchase of recycled-content paper and other environmentally-friendly products and services. State purchasing conducted a voluntary survey on the desire and use of recycled-content paper that was attached to the memo. NDEP provided a Fact Sheet expounding the benefits of using recycled-content paper also attached with the memo.

There were 59 respondents to the survey and the overwhelming majority (57 to 2) indicated they would buy recycled-content paper if the quality were equal to virgin stock. However; only 24 respondents indicated that they would be willing to pay more for such paper. Extensive use of paper containing 30% post-consumer fibers by agencies of the Department of Conservation and Natural

Resources (DCNR) using a number of different makes and models of copy machines and printers indicates it is of equal quality and performance to 100% virgin fiber paper.

Unfortunately at current pricing levels the 30% recycled-content paper cost approximately 10% more than virgin paper, and state agencies are not buying it. Table 4.1 below summarizes state purchasing orders of 8½" x 11" and 8½" x 14" copy paper through 2nd Quarter SFY '03. It is important to note that a number of non-state public agencies utilize this system and the paper orders of these public agencies are included in these totals also.

Table 4-1 Copy Paper Orders through Nevada State Purchasing Warehouse¹

	SFY 2001		SFY 2002		SFY 2003 ²	
	Las Vegas	Reno	Las Vegas	Reno	Las Vegas	Reno
8½" x 11" Virgin Stock Paper (cases)	9,889	24,082	5,790	15,061	5,061	11,005
8½" x 11" 30% Recycled-Content Paper (cases)	0	0	0	49	11	250
8½" x 14" Legal Paper (reams)	3,284	8,669	1,715	4,155	930	3,476

1) Values include all public agencies participating through the state purchasing division warehouse.

2) Data through December 31, 2002.

In SFY '02 public agencies ordered 20,851 cases of 8½" x 11" virgin stock paper from the Reno and Las Vegas warehouses compared to 49 cases of the 30% recycled-content paper. SFY '03 orders through December 31, 2002 are 16,066 cases of virgin stock as compared to 261 cases of recycled-content paper. Very nearly all the purchases of recycled-content paper were made by agencies in the DCNR or by State Purchasing. In May 2002, the director of DCNR sent a memo to all DCNR administrators encouraging them to use recycled-content paper. Paper procurement data from the Reno and Las Vegas warehouses indicate this had a significant effect, although a significant quantity of virgin paper is still purchased by DCNR agencies. Likely this is due to the cost differential.

NDEP believes that state government needs to do more in support of the legislation adopted in AB 320 and the other preferential purchasing initiatives. Although it has been over ten years since its passage, little has been accomplished by state government or most of the municipalities on this issue. One outstanding exception to this is Washoe County. With leadership coming from the Washoe County District Health Department, Washoe County has implemented an environmentally-preferable procurement policy that has gained national recognition. In close partnership with EPA's *WasteWise* program, Washoe County has instituted a number of waste reduction and recycling initiatives including a very progressive procurement policy.

Washoe County purchasing department has implemented a number of practices which save money and promote recycling. For years, all white copy paper purchased by Washoe County has been 30% post-consumer recycled content. Currently, many miscellaneous paper office supplies used by Washoe County are made of recycled-content materials as well. Washoe County implemented a carpet squares program that eliminates the use of broadloom carpeting throughout Washoe County facilities and in all new construction. Only worn and damaged carpet squares are replaced, and they are refurbished up to three times. This program has enabled the county to carpet many facilities that would otherwise not be carpeted, improving ergonomics and the R-value insulation rating of the carpeted buildings. Washoe County equipment shops use re-refined oil for their equipment needs. The county equipment shops collect and sell used motor oil and hydraulic fluids back to the oil recycler realizing significant cost savings. The county also collects used tire casings discarded by the Washoe County School District from school buses. These casings are then used to make re-treads used on county trucks. Washoe County purchasing department estimates \$500,000 was saved in 2002 thanks to this practice. Finally, all trash can liners used by the county are made of recycled-content materials.

Washoe County proactively seeks new opportunities for environmentally-preferable procurement. The board of commissioners of Washoe County have officially adopted a "buy-recycled" policy that has moved all these initiatives forward. DCNR has demonstrated that getting the "OK" from the top to order recycled-content goods strongly influences these purchases. In order to realize the cost efficiencies of volume, public agencies need to demand recycled-content paper. The state legislature has given public agencies the tools they need to institute such programs and policies, now what is needed is the decision to do so.

4.4 New Business Development

NRS 444.587 directs NDEP to consider financial assistance and incentives to encourage businesses that use recycled materials to locate in the state and to provide any recommendations on such in this report. As discussed above, NDEP with help from EPA did fund the NCED to recruit and promote Nevada as a state in which to locate recycling and re-manufacturing businesses. These efforts have largely been unsuccessful.

In 1999, a national composite lumber manufacturer did open a new plant in Fernley, NV. The Trex™ Company, Inc. manufactures a wood/polymer lumber that is used primarily in deck construction. Using a proprietary process, Trex™ combines waste hardwood fibers and reclaimed polyethylene film (such as plastic sheeting and grocery bags) to make a wood/plastic composite that offers the workability of wood without wood's on-going maintenance requirements. Trex™ began production at its 160,000 square foot facility in Fernley the summer of 1999. Doug Hart, a Trex distributor, commented, "Having a Trex™ plant on the West Coast provides major benefits in both service and reduced

freight and handling costs. We can service the entire West Coast out of Fernley by truck in under 48 hours whereas rail cars from the east have been taking 4-8 weeks to reach us. The Trex™ product out of the Fernley plant looks great. It is the same high quality that we have become accustomed to receiving from Trex's Winchester, Virginia plant."

In spite of the Trex™ success story, other factors have hindered Nevada from attracting a significant number of re-manufacturing businesses. Water supply and population-base demands can be a barrier. Positive factors helping to encourage recycling service businesses include a burgeoning population resulting in an increasing potential supply, and with a dependable supply of quality material it is feasible to ship the collected recyclables to market. Therefore, NDEP believes the most beneficial focus for recycling market development in Nevada would be on recycling service providers and processors. Such businesses include document destruction and paper fiber recyclers, composters, auto wreckers and scrap yards, automotive oil and anti-freeze recyclers, rendering and grease recyclers, toner cartridge re-manufacturers, and others.

While curbside residential collection programs in Carson City, Clark, and Washoe counties have produced an on-going supply of recyclable materials, these materials are collected and marketed by the two largest garbage collection providers in the state. Another potential source of recyclables are offices, commercial facilities, and businesses. As established at the Clark County recycling forum, there is often a lack of information available to businesses regarding the availability of recycling service providers.

NDEP has proposed in AB 447 (Appendix A) that in counties with populations of 100,000 or greater, business license applications shall be accompanied by information on opportunities for waste reduction and recycling. NDEP also proposes that the affected counties provide consultation regarding waste reduction and recycling as requested by local businesses. The intent of such public service is to encourage business recycling and reduce disposal while helping to create markets for recycling services.

The impact of such commercial recycling can be significant. NDEP has communication with a large order processing and distribution center in Las Vegas that has related quantitative data regarding their in-house recycling program. The company previously recycled its waste cardboard only and sent approximately 100 tons of waste per month to landfill. At that time, the company was recycling about 25% of its total generated solid waste. In partnership with its cardboard recycling provider, the company gradually added other waste streams to the recycling bins and in December 2001 implemented an official waste management program with the goal of removing all recyclables from the waste stream.

In 2002, the company increased its recycling rate to over 60%. The result was a savings in waste disposal costs of over \$23,000 or approximately 30% with no additional cost incurred for the expanded recycling services. Company staff have indicated that part of the success of the program stems from timely communication of the program's results with employees. The positive feedback helps keep up performance of the program while increasing employee morale.

Through good and poor economic times, a number of recycling processing businesses in Nevada have proven viable. The issue of whether to encourage this business sector should not be based on if they can prosper without local demand for their material, but how to assure this business sector remains an attractive and productive part of the local economy. This responsibility not only lies with economic development agencies looking for incentives to attract such businesses, but also with policymakers to assure that regulatory burdens do not place needless or unfair barriers before them.

4.5 Market Development Summary

In this tenth annual report, NDEP has remained close to many previous recommendations. Market development for recyclables remains a difficult issue, but the emphasis needs to remain with procurement of recycled-content goods and new recycling business growth. NDEP is also recommending that statute mandating the study and encouragement of recycling market development be repealed until more appropriate legislation can be passed.

Summary of recommendations:

- 1) Repeal NRS 444.587 and seek drafting of new legislation that will place recycling market development responsibilities on an appropriate agency designated for economic development. Such legislation needs to provide adequate resources and authority to fulfill its mandates. NDEP will continue to provide information and technical support of market development issues as necessary.
- 2) Re-emphasize recycled-content procurement. Current statute and regulation are sufficient to enable end-users and purchasing agents to make preference for recycled-content products. There needs to be more education by the appropriate agencies on the quality and benefits of buying recycled. Often times, environmentally-preferable procurement results in substantial savings as is demonstrated in Nevada by the Washoe County model. Communication from senior administration affirming the benefits and desirability of having staff take environmentally-preferable actions is essential.
- 3) Recognize the importance of recycling service and processing businesses to the growth and viability of solid waste recycling in Nevada. Continued population growth assures an increasing source of recyclables, municipal and state economic development agencies should be aware of the markets and opportunities being created in this business sector. Decision makers and regulators must maintain fair access to

markets and equivalent operating standards for recyclers and non-recyclers to eliminate barriers to business growth.